PRESENTER'S PACKET

Tuning Protocol Steps for the Presenter

Presentation (Read the ***italicized*** parts aloud as if you were the teacher.)

This is from my fifth grade class. We were working on this outcome from the standards:

(Give participants the page that has the standards, assignment, key questions, and chart on it.)

All students will know that tables and graphs can show how values of one quantity are related to values of another. Use a graph to identify, interpolate, and/or extrapolate a trend in data.

This was an early assignment in a unit leading to an experiment on measuring. I also wanted students to looking at relationships for patterns. First we did some work together with magnets. I asked the students to record 5 out 15 episodes with their magnets. They graphed those first 5 episodes. Then I told them that they would be graphing the remaining 10 episodes and I wanted to know about trends they were seeing.

I defined the word "trend" orally and on the board for them:

a general tendency, movement or direction.

Then, I gave them an assignment to work on the rest of the time and take home to finish.

Here's their assignment. (Have participants read the assignment as you read it aloud.*)*

Assignment:

At home a student has made herself a cup of hot chocolate. The graph shows the temperature of the hot chocolate over time.

1. ***Describe the trend of temperature shown on the graph.***
2. ***Explain why you think the temperature graph looks the way it does.***

I provided the graph that goes with the assignment. So the student work is a piece I pulled randomly from the pile of responses to the homework assignment. I'll give you some time to read the response and maybe take notes. (Give 3-5 minutes)

Here are my key questions. (Have participants look at the sheet they have that contains the key questions.)

1. ***Does the student achieve the standard? At a level appropriate for fifth graders?***
2. ***What can I do to help this student improve the response?***

Clarifying Questions: During this part make up answers that seem appropriate to you in terms of the questions you are asked.

Writing: Remind your group of the key questions above and write on them yourself.

Participant Discussion: Take notes below as if you were the teacher who gave the assignment that produced the work being examined. You will get a chance to reflect on what you heard next, as if you were the teacher.

What I Heard	***Reflection on What I Heard***

Reflection: Reflect aloud on what you heard. This is a time to make corrections in terms of what the group understood. But, more importantly, it the time for you to think aloud about what you heard and what it might mean to you as a teacher.

Debriefing: Share with your group how it felt to be the person who provided the student work sample. Continue open discussion of the key questions and other aspects of the protocol.

We will do an all-group debriefing to conclude this experience.

THANK YOU VERY MUCH FOR VOLUNTEERING TO BE THE PRESENTER FOR THIS PROTOCOL!!

IN THE PARTICIPANTS' PACKET

Standard:

All students will know that tables and graphs can show how values of one quantity are related to values of another. Use a graph to identify, interpolate, and/or extrapolate a trend in data.

Assignment:

At home a student has made herself a cup of hot chocolate. The graph below shows the temperature of the hot chocolate over time.

1. Describe the trend of the temperature shown on the graph.

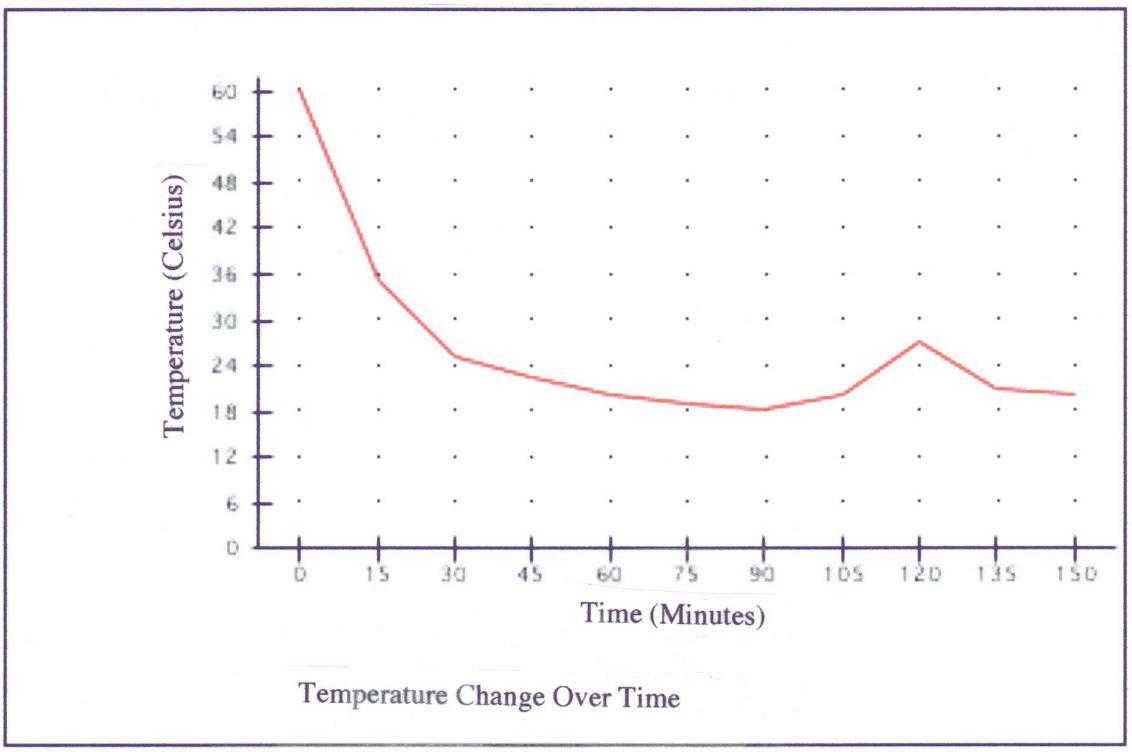
2. Explain why you think the temperature graph looks the way it does.

Key Questions:

1. Does the student achieve the standard? At a level appropriate for fifth graders

2. What can I do to help this student improve the response?

Chart I Gave Students (Students were given this graph to use for their assignment. They **did not** make the hot chocolate and create this graph from the experience.



Student Work Sample #1

How Hot Is Hot Chocolate?

By _____

My friend Nancy made a cup of hot chocolate. She made it in the microwave. She noticed that it got cool very quickly.The next time she made hot chocolate, she used a thermomenter and some graph paper. She put the thermomenter into the hot chocolate right after she took it out of the microwave. It was pretty hot! 60 degrees.

But it got really cool within 15 minutes. It went down to 36 degrees. She measured it after 30 minutes it was only a little bit cooler 24 degrees. It stayed about that cool for a long time.

My theory is that Nancy got upset about how cool her hot chocolate was. She put it back into the microwave to warm it up. But she didn't leave it in very long it only went up to about 25 degrees.

I think that you should drink hot chocolate right after it get's out of the microwave.